Rear - Golf, GTI, Jetta & New Beetle

APPLICATION

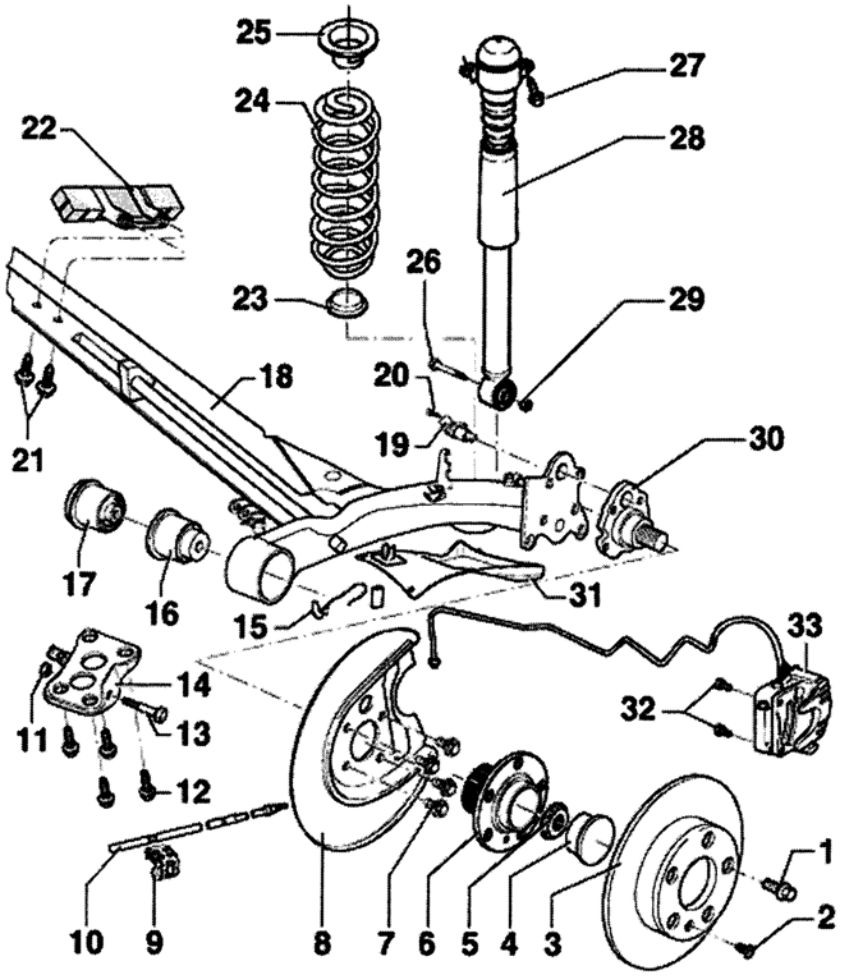
1999 GOLF, GTI & JETTA

Information in this article applies to late production 1999 vehicles. For Golf and GTI, the 7th and 8th characters of the VIN are 1J for the late 1999 production vehicles. For Jetta, 7th and 8th characters of the VIN are 9M for the late 1999 production vehicles. For early 1999 model coverage, see **SUSPENSION - REAR (UP TO EARLY 1999 MODELS)** article.

DESCRIPTION

Rear suspension uses control arms and axle beam for stabilization. Control arms and axle beam are combined as one unit. Major components are axle beam, coil springs, shock absorbers, stabilizer bar, stub axle and wheel bearings. Brake drums or discs rotate on stub axles bolted to control arms. See **Fig. 1** .

New Beetle, Jetta and Golf models manufactured after 1999 are fitted with a hydraulic bonded rubber bushing which cannot be replaced. If the hydraulic bonded rubber bushing is damaged, rear axle beam must be replaced. To aid in identification of models equipped with hydraulic bushing, a vibration damper is fitted to axle beam.



1. Lug Nut
2. Disc Retaining Screw
3. Brake Disc
4. Wheel Bearing Dust Cap
5. Wheel Bearing Nut (Always Replace)
6. Wheel Hub W/Bearing
7. Stub Axle Bolt (Always Replace)
8. Splash Plate
9. Parking Brake Cable Bracket
10. Parking Brake Cable
11. Rear Axle Bearing Bracket Nut (Always Replace)
12. Rear Axle Bearing Mounting Bracket Bolt (Always Replace)
13. Rear Axle Bearing Bracket Bolt (Always Replace)
14. Rear Axle Bearing Bracket
15. Parking Brake Cable Clip
16. Bonded Rubber Bushing
17. Hydraulic Bonded Rubber Bushing
18. Axle Beam
19. Speed Sensor
20. Speed Sensor Mount Socket-Head Bolt
21. Vibration Damper Mounting Bolt (Always Replace)
22. Vibration Damper
23. Coil Spring Spacer Bushing (Zinc)
24. Coil Spring
25. Spring Seat
26. Lower Shock Absorber Mounting Bolt (Always Replace)
27. Upper Shock Absorber Mounting Bolt (Always Replace)
28. Shock Absorber
29. Lower Shock Absorber Mounting Bolt (Always Replace)
30. Stub Axle
31. Stone Guard
32. Brake Caliper Mounting Bolt
33. Brake Caliper

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Fig. 1: Exploded View Of Rear Suspension
Courtesy of VOLKSWAGEN UNITED STATES, INC.

ADJUSTMENTS & INSPECTION

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

For Golf, GTI and Jetta, see **SPECIFICATIONS & PROCEDURES - FROM LATE PRODUCTION** article in WHEEL ALIGNMENT. For New Beetle, see **SPECIFICATIONS & PROCEDURES** article in WHEEL

ALIGNMENT.

WHEEL BEARING

NOTE: The wheel bearing and wheel hub are installed together in a housing. This wheel bearing/hub unit is maintenance and adjustment free. Adjusting and servicing is not possible.

ON-VEHICLE SERVICE

WELDED NUTS IN AXLE BEAM

If the welded nut threads in the cross member are damaged, the thread can be serviced with Heli-coil thread insert.

Servicing work may only be carried out once per thread. If servicing is necessary after this, the nuts must be replaced. Observe the operating instructions of the VAS (VW) repair kit.

CAUTION: When drilling, it is essential that eye protection be worn!

Have the thread repair checked by the responsible foreman or next person in charge. Correct any damage to the underbody sealant layer. Only use the VAS repair kit listed in the for service work .

VAS THREAD REPAIR KIT

Thread	VAS Part No.
M10	6024
M12x1.5	6058
M14x1.5	6027

REMOVAL & INSTALLATION

AXLE BEAM

WARNING: Do not attempt to weld or straighten the axle beam or the stub axle.

CAUTION: When removing suspension assembly, add weight to rear of vehicle to prevent tipping due to change in center of gravity.

Removal & Installation

1. Measure dimension a from the center of the wheel to the lower edge of the wheel housing. See **Fig. 2 -**

Fig. 3 . Make a note of the measurement. This is necessary to tighten the bolts for the rear axle to the bearing bracket.

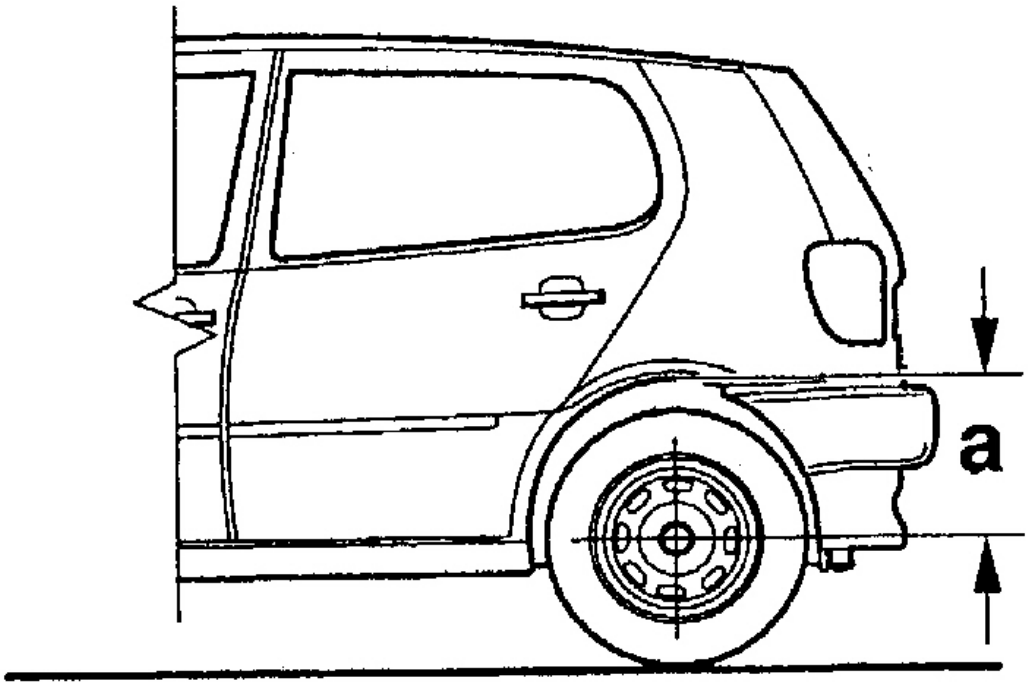

Fig. 2: Measuring Vehicle Standing Height At Rear Wheel (Golf, GTI & Jetta)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

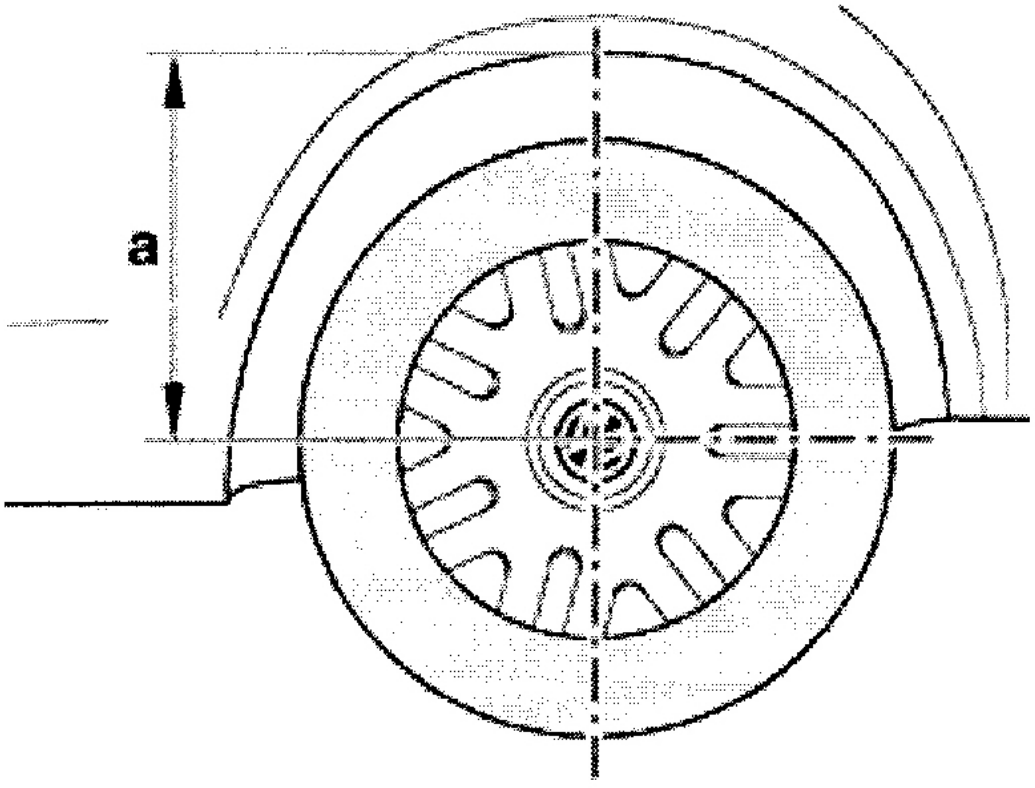

Fig. 3: Measuring Vehicle Standing Height (New Beetle)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

2.

NOTE: The bearing bracket should not be removed to remove the rear axle! (Bracket which supports rear axle beam on body.)

Install brake pedal loading device V.A.G1869/2 to apply brakes. Actuate the brake pedal with brake pedal loading device.

3. Raise vehicle so that rear wheels still contact the ground, but upper shock mount bolts are accessible. Remove upper shock absorber mounting bolts.
4. Raise vehicle and remove wheels.
5. Tighten vehicle to the lifting platform Before removing rear axle, the vehicle must be fixed to the support arms of lifting platform. If the vehicle is not secured, there is a risk that it may slip off the hoist. Remove the plugs from the trailing arm (3) and tighten the tensioning strap (1). See **Fig. 4** . Support arm of lifting platform (2) with tightening strap T10038. The vehicle must be tightened with the tensioning straps on left and right side.

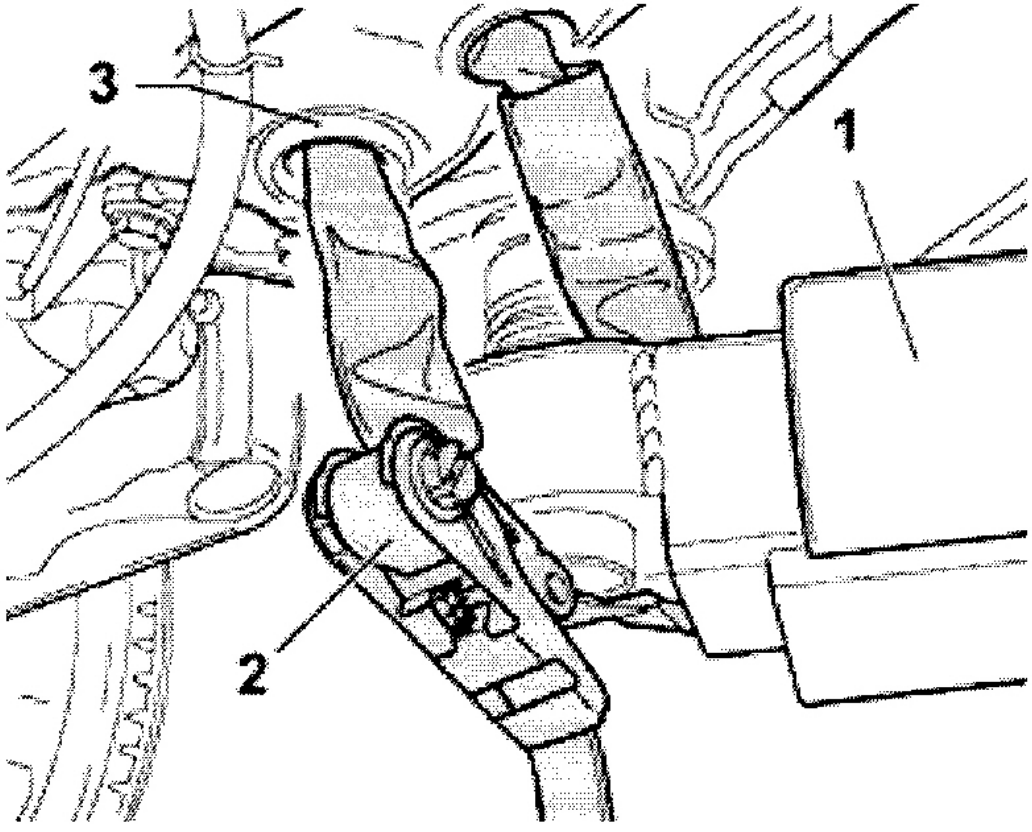

Fig. 4: Securing Axle Beam To Body
Courtesy of VOLKSWAGEN UNITED STATES, INC.

6. On vehicles with automatic headlight range control, removing connecting link from Left Rear Level Control System Sensor from rear axle. See **Fig. 5** .

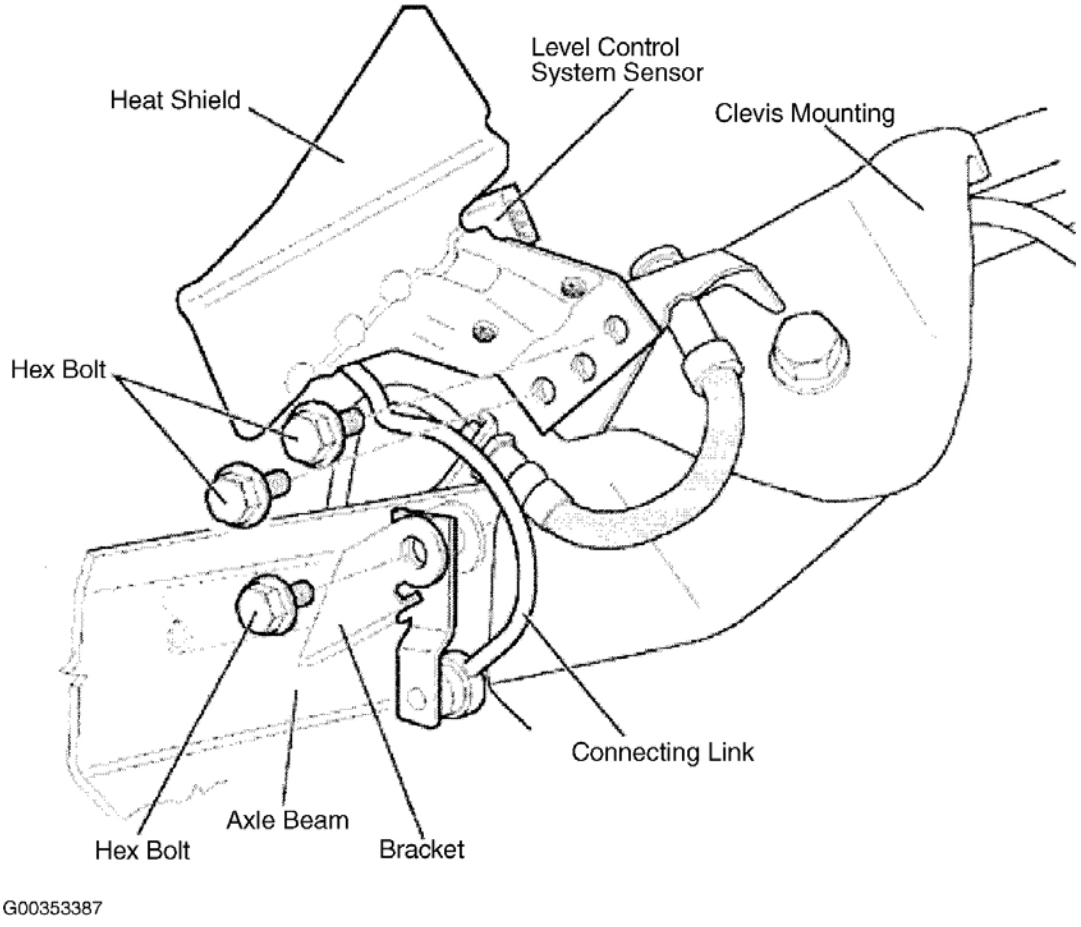

Fig. 5: Locating Level Control System Sensor
Courtesy of VOLKSWAGEN UNITED STATES, INC.

7. On all vehicles, unclip emergency brake cable from axle beam (arrows). See **Fig. 6** . Remove clips from flexible brake hose (2), and separate and plug brake lines.

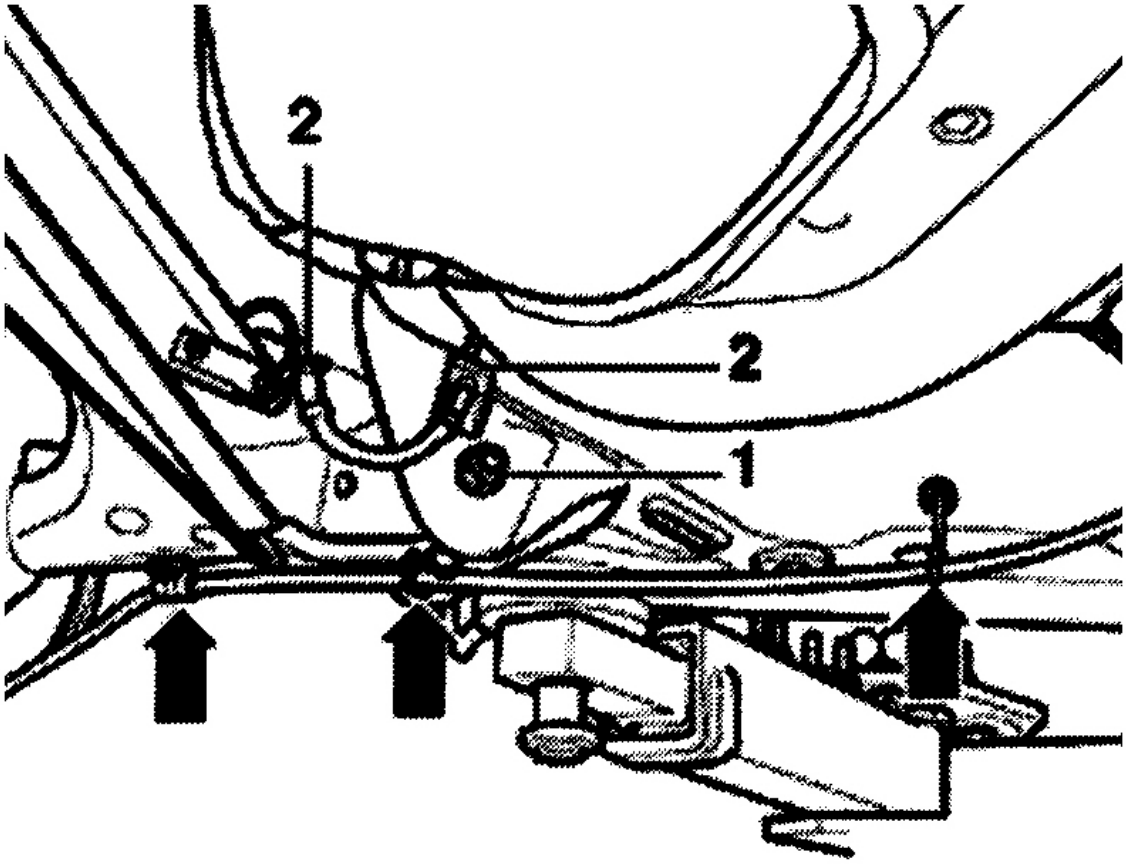

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Fig. 6: Locating Brake Cables
Courtesy of VOLKSWAGEN UNITED STATES, INC.

8. Disconnect and plug brake line hose from body to rear axle beam.
9. Remove brake calipers. Support calipers with mechanics wire. DO NOT allow calipers to hang by own weight on brake hoses.
10. Disconnect ABS wheel speed sensor harness connector (1), disconnect harness from axle beam. See **Fig. 7** .

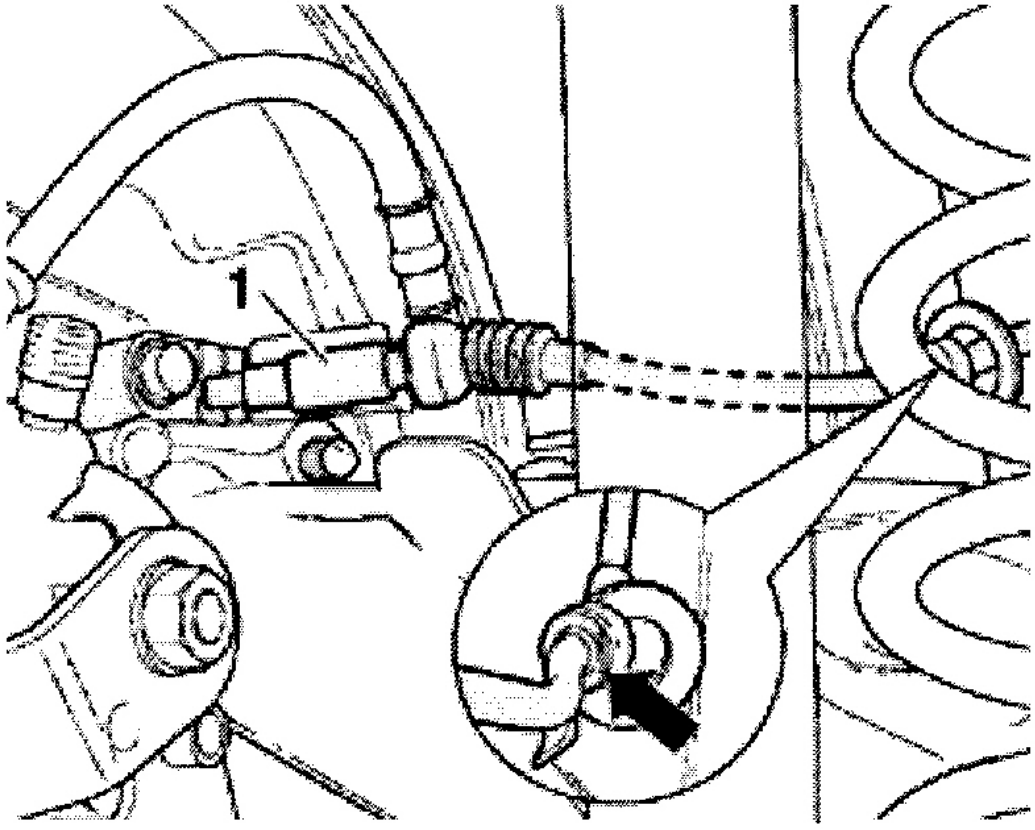

Fig. 7: Locating Rear ABS Wheel Sensor Connector
Courtesy of VOLKSWAGEN UNITED STATES, INC.

11. Vehicles without ABS, remove bolts (1) and (2) for brake pressure regulator. See **Fig. 8** .

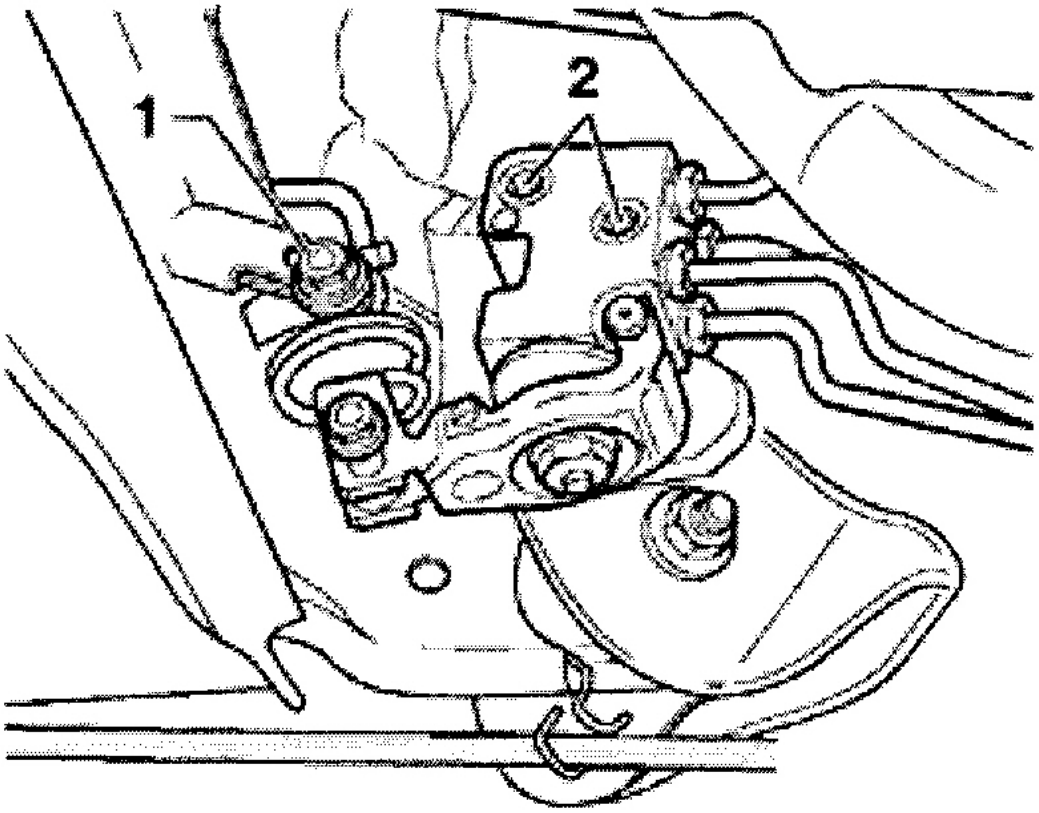

Fig. 8: Locating Brake Pressure Regulator
Courtesy of VOLKSWAGEN UNITED STATES, INC.

12. On all vehicles, use transmission jack to support rear axle. Remove axle beam-to-bearing bracket bolts (1). See **Fig. 9** . Lower rear axle assembly from vehicle.

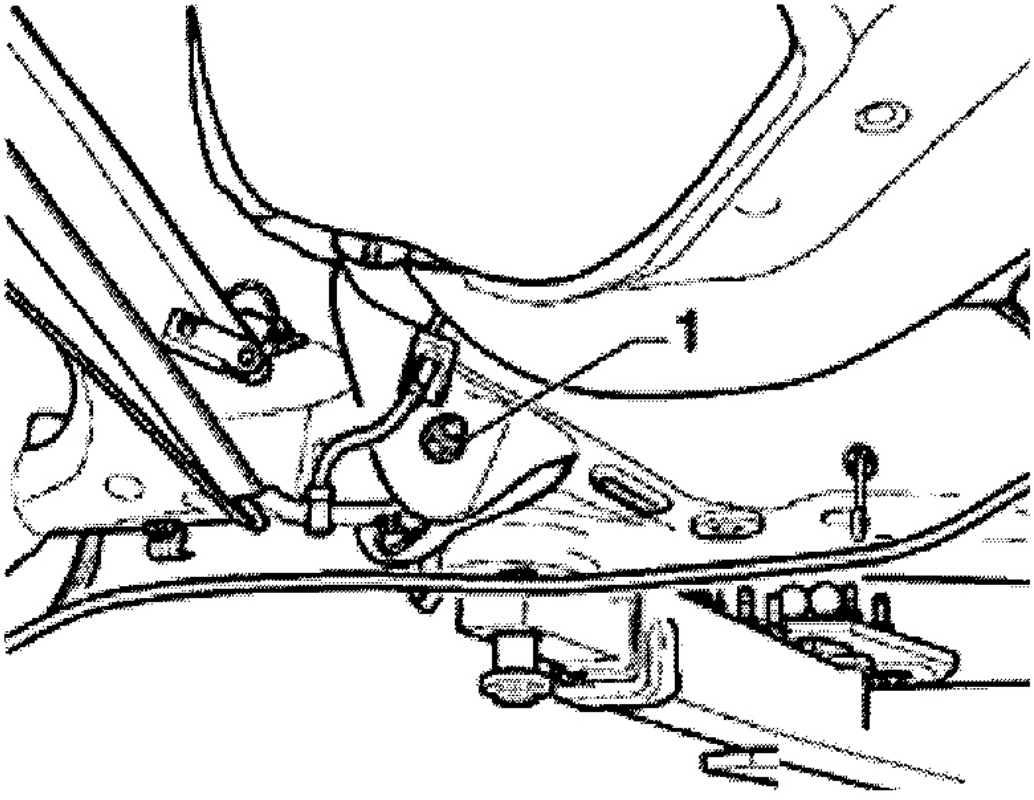

Fig. 9: Locating Axle Beam-To-Bearing Bracket Bolts
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Installation

1. Grease bonded rubber bushing (kidney shaped cavity) with Assembly Paste (G 052150 A2) before installing rear axle. If the rear axle is not "lubricated" when installed, it will be noisy while driving.
2. Tightening bearing bracket is only possible, when the measured value (a) from the middle of wheel hub to lower edge bordering wheel housing is reached (measured before starting work sequence). See **Fig. 10** . Otherwise the bonded rubber bushing will be distorted, resulting in reduced service life.

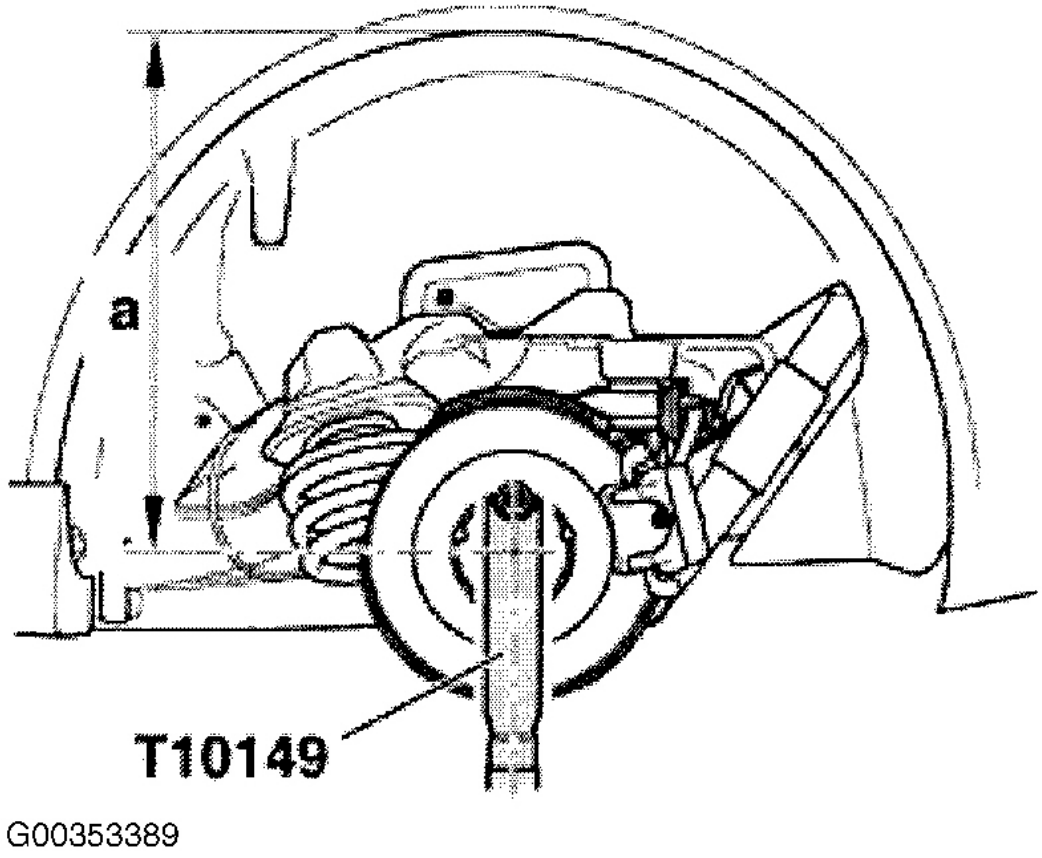

Fig. 10: Setting Rear Axle Beam Height
Courtesy of VOLKSWAGEN UNITED STATES, INC.

3.

CAUTION: Do not raise or lower vehicle while engine and transmission jack is under vehicle. Do not leave engine and transmission lift under the vehicle longer than necessary.

Turn the wheel hub until one of the holes for the wheel bolts is at the 12 o'clock position. Install thrust piece T10149 with a wheel bolt. See **Fig. 10** . Lift the wheel bearing housing using engine and transmission jack until dimension (a) is reached.

4. Tighten bolts from bearing bracket to rear axle with tightening torque. See **TORQUE SPECIFICATIONS** . Installation is continued in reverse sequence.
5. Bleed brake system. For Golf, GTI and Jetta, see **DISC** article in BRAKES. For New Beetle, see **DISC** article in BRAKES.
6. After installing check position of steering wheel during a test drive. If steering wheel is not in straight ahead position the front axle alignment must be checked!

BONDED RUBBER BUSHING (NON-HYDRAULIC)

NOTE: Before attempting replacement of bonded rubber bushing read notes concerning bushings under DESCRIPTION .

NOTE: On vehicles equipped with replaceable bonded rubber bushing, bushing can be replaced without removing axle beam.

Removal (Except Beetle)

1. Measure dimension a from the center of the wheel to the lower edge of the wheel housing. See **Fig. 2** . Make a note of the measurement. This is necessary to tighten the bolts for the rear axle to the bearing bracket.
2. Install brake pedal loading device V.A.G1869/2 to apply brakes. Actuate the brake pedal with brake pedal loading device. The bearing bracket should not be removed to remove the rear axle!
3. Raise and support vehicle.
4. Remove wheels. Separate brake lines (arrow A) and remove clip. See **Fig. 11** . Remove left brake hose from bracket (2). Remove right brake hose from rear axle. Remove parking brake cable from brackets. (arrow B).

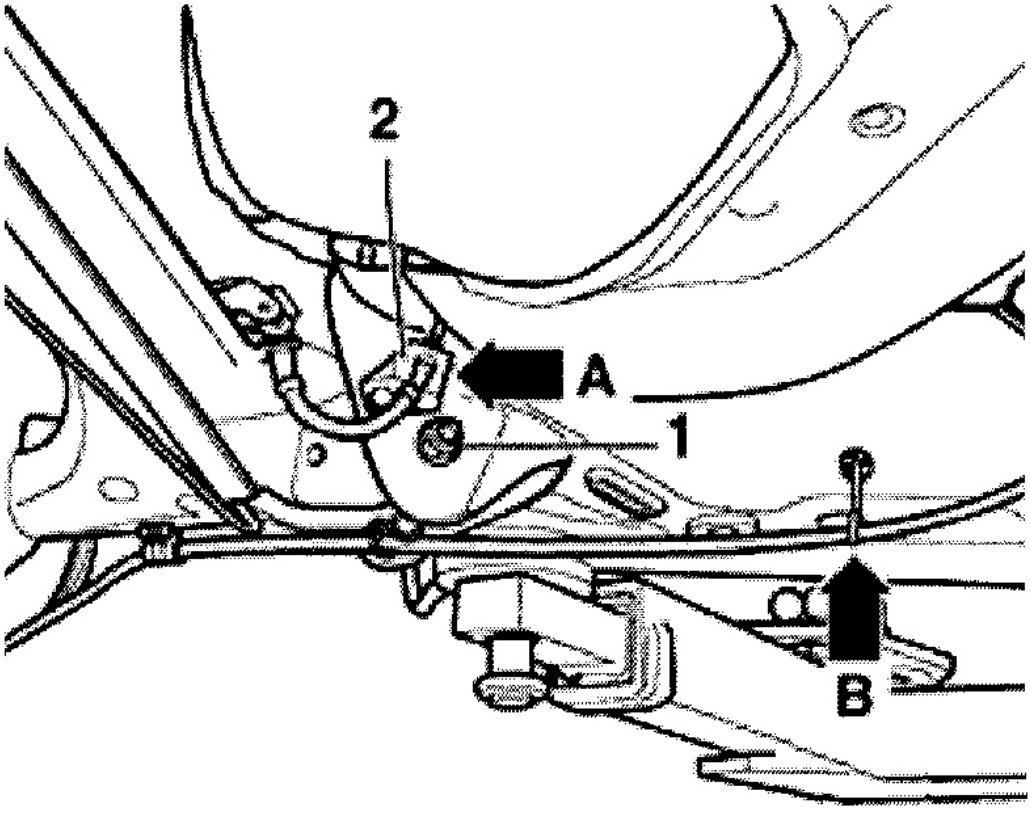

Fig. 11: Locating Brake Lines
Courtesy of VOLKSWAGEN UNITED STATES, INC.

5. Place engine/transmission jack V.A.G1383A under axle beam. Remove bolt (1) for bearing bracket on rear axle on both sides. See **Fig. 11** . Lower rear axle using engine and transmission jack V.A.G1383A.
6. Tighten rear axle with tensioning strap T10038 over mounting from muffler system. See **Fig. 12** .

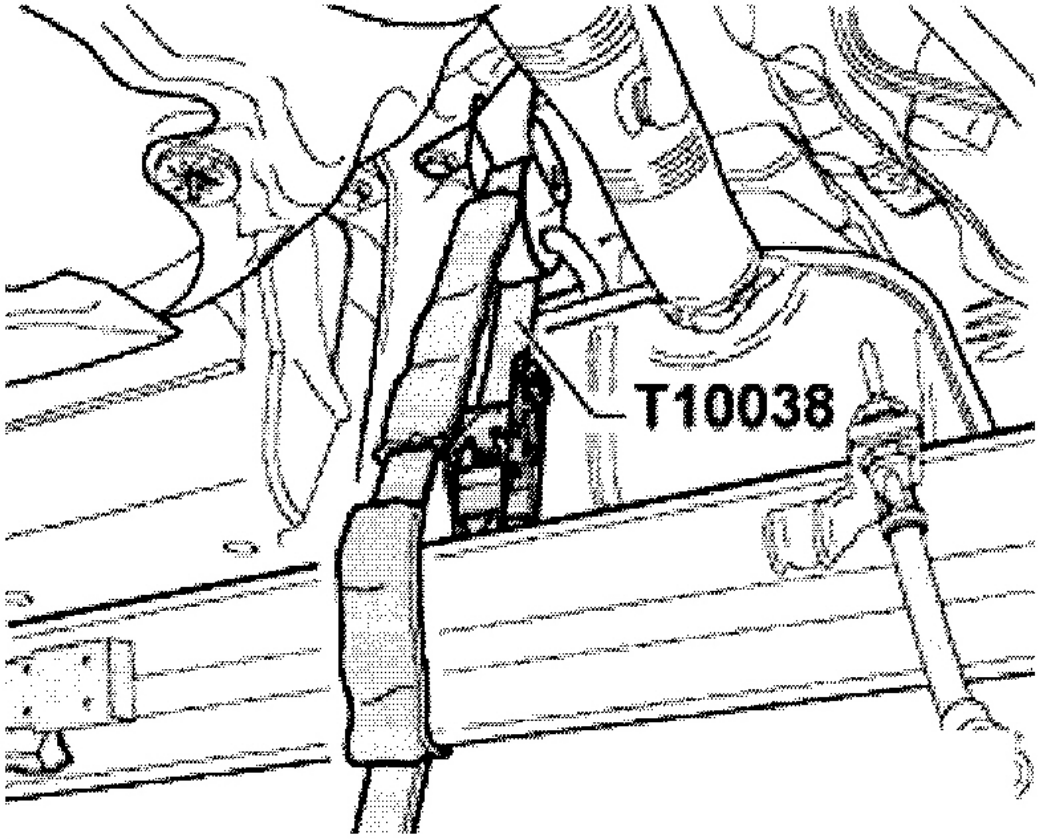

Fig. 12: Installing Tensioning Strap On Axle Beam
Courtesy of VOLKSWAGEN UNITED STATES, INC.

7. On vehicles with automatic headlight range control, removing connecting link from Left Rear Level Control System Sensor from rear axle. See **Fig. 5** .
8. On all vehicles, place engine/transmission jack V.A.G1383A with universal transmission support V.A.G1359/2 under the control arm (danger of accident from falling parts when pulling out the wheel hub and the wheel bearing).
9. Press out rear axle beam bonded rubber bushing using special tools. See **Fig. 13** .
    - 1 - VAS6178
    - 2 - VAS6180/1
    - 3 - VAS6180/4 long
    - 4 - VAS6180/3
    - 5 - Thrust tube 3416/2
    - 6 - VAS6180/2

- 7 - V.A.G1383A with V.A.G1359/2

NOTE: Edges of separating device VAS6180/2 must come in position between the collar of the bonded rubber bushing and the connection of the control arm. The note "Top" on the separating device VAS6180/2 must point to the control arm.

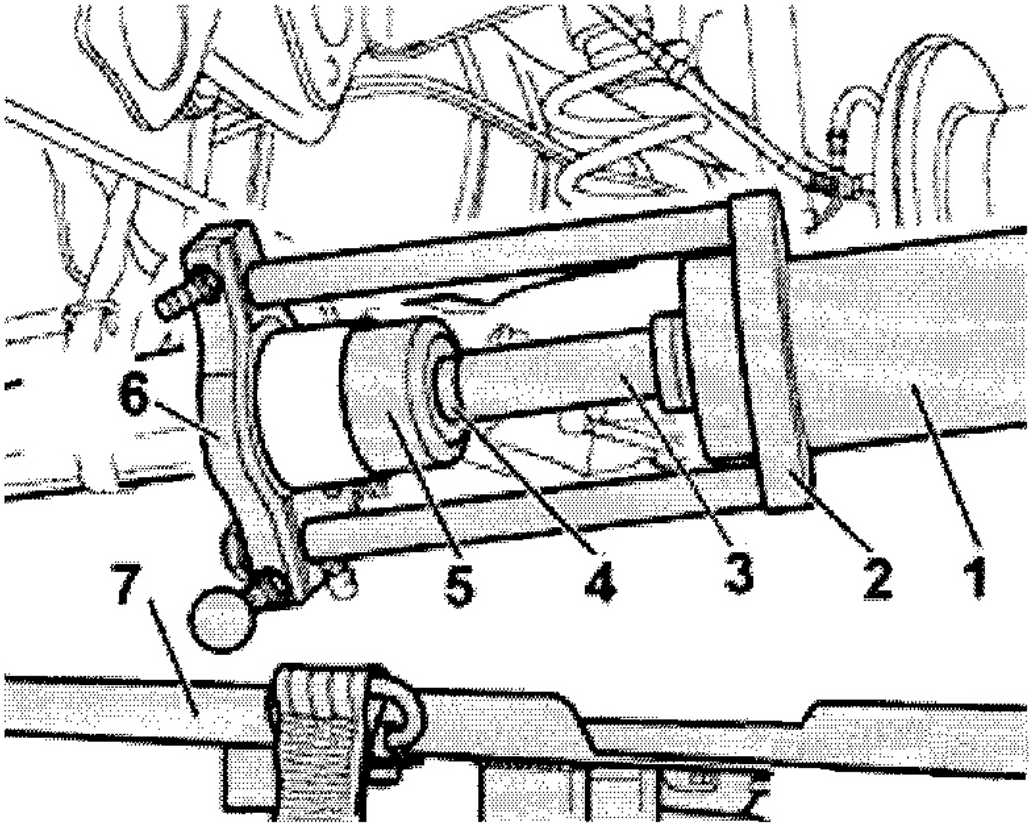

Fig. 13: Removing Rear Axle Beam Bonded Rubber Bushing
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Installation (Except Beetle)

1. Bonded rubber bushing is marked on face with the marks (1). See **Fig. 14** . They must align with the edge (arrow) on trailing arm (2). Mark position of marks (1) on bonded rubber bushing.

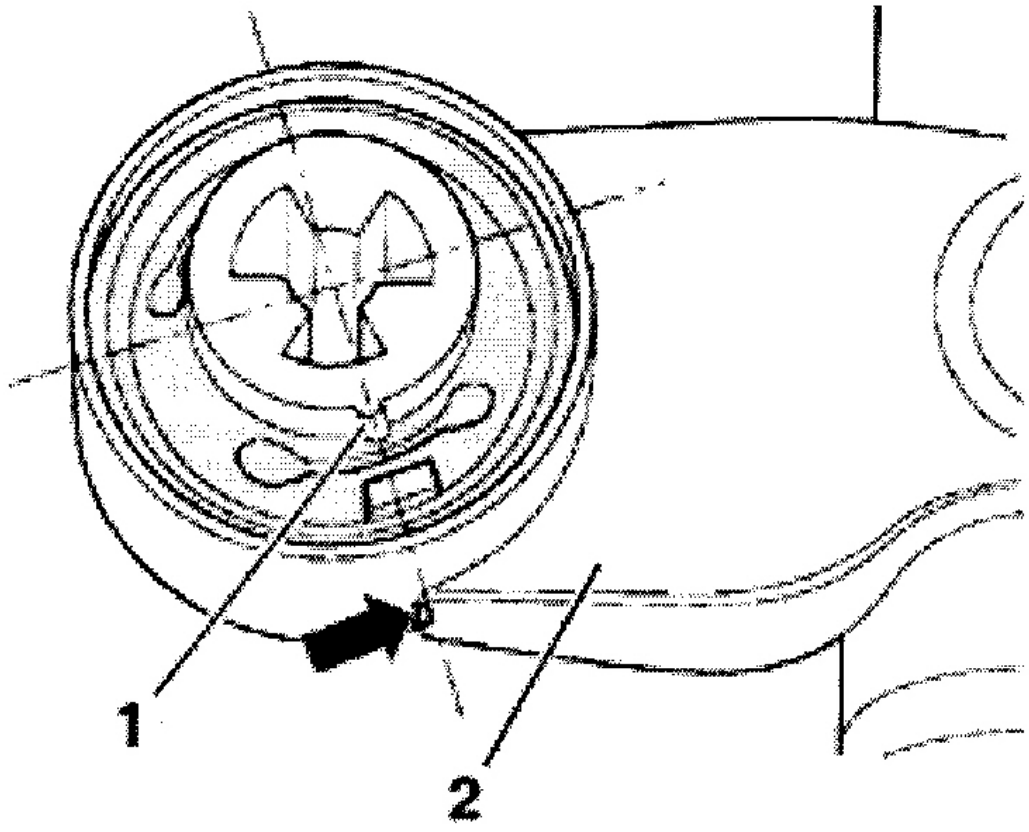

Fig. 14: Aligning Rear Bonded Rubber Bushing
Courtesy of VOLKSWAGEN UNITED STATES, INC.

2. Install bonded rubber bushing using special tools on rear axle. See **Fig. 15** .
    - 1 - VAS6178
    - 2 - VAS6180/1
    - 3 - VAS6180/6
    - 4 - VAS6180/7
    - 5 - Bonded rubber bushing
    - 6 - VAS6180/8
    - 7 - V.A.G1383A with V.A.G1359/2

NOTE: The note "Top" on the device VAS6180/8 points to the control arm.

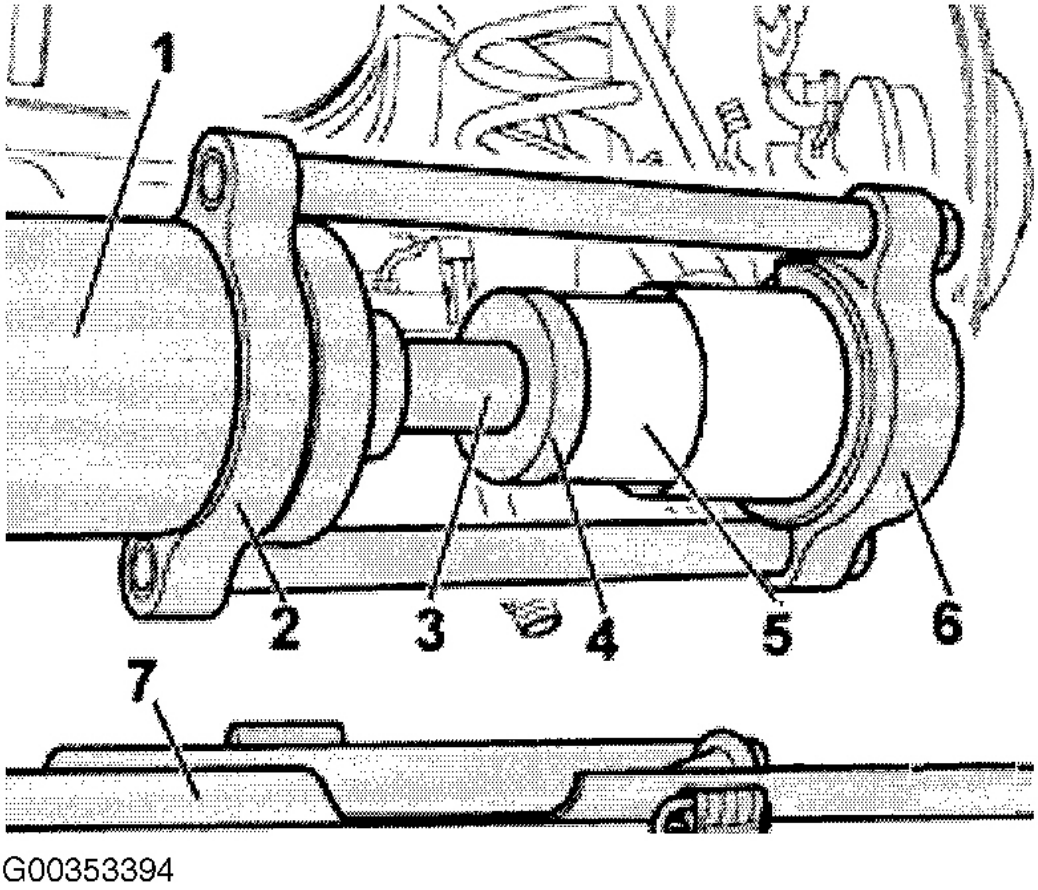

Fig. 15: Installing Rear Bonded Rubber Bushing
Courtesy of VOLKSWAGEN UNITED STATES, INC.

3. BEFORE installing bonded rubber bushing, make sure that the mark (arrow A) align with the edge (arrow B) of trailing arm. See **Fig. 16** .

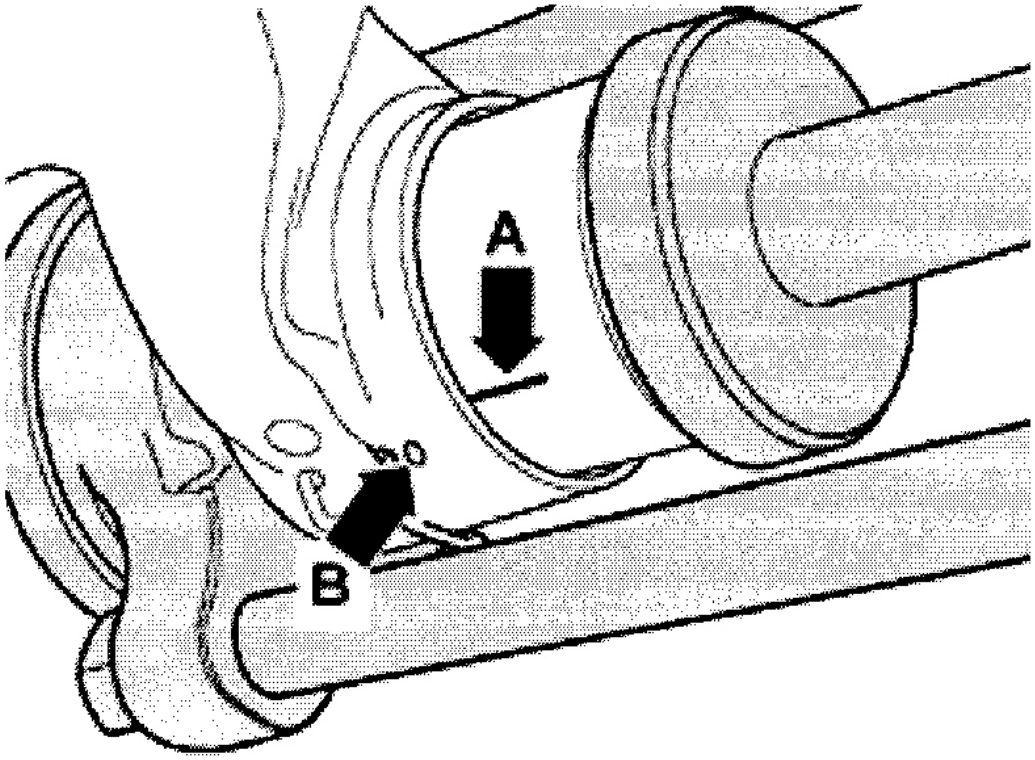

Fig. 16: Aligning Bonded Rubber Bushing To Trailing Arm
Courtesy of VOLKSWAGEN UNITED STATES, INC.

4. Press in bonded rubber bushing until a gap of 0.008 in. (0.2 mm) is available. See **Fig. 17** . Measure this gap (arrow) with a measure gauge (A). Check position of bonded rubber bushing after installing.

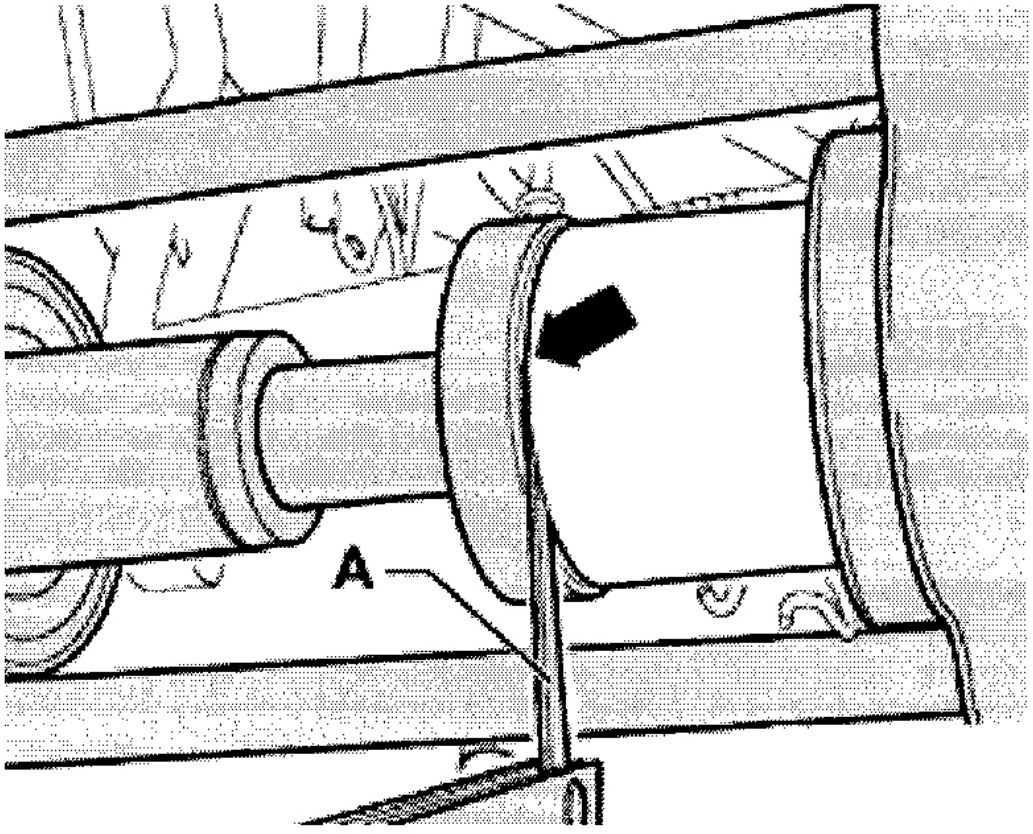

Fig. 17: Checking Bonded Rubber Bushing Installed Clearance
Courtesy of VOLKSWAGEN UNITED STATES, INC.

5.

CAUTION: If the vehicle is not secured, there is a risk that it may slip off the hoist.

Tighten vehicle to the lifting platform. Remove the plugs from the trailing arm (3). See **Fig. 4** . Tighten the tensioning strap (1). Support arm of lifting platform (2). Tightening strap T10038. The vehicle must be tightened with the tensioning straps on left and right side.

6. Grease bonded rubber bushing kidney shaped cavity with assembly paste G052150A2 before installing rear axle. If the rear axle is not "lubricated" when installed, it will be noisy while driving.

7.

CAUTION: Do not raise or lower vehicle while engine and transmission jack is under vehicle. Do not leave engine and transmission lift under the

vehicle longer than necessary.

Tightening bearing bracket is only possible, when the measured value (a) from the middle of wheel hub to lower edge bordering wheel housing is reached. See **Fig. 10** . Otherwise the bonded rubber bushing will be distorted, resulting in reduced service life. Turn the wheel hub until one of the holes for the wheel bolts is at the 12 o'clock position. Install the support T10149 with a wheel bolt. Lift the wheel bearing housing using the engine and transmission jack until dimension a is reached.

8. Tighten bolts from bearing bracket to rear axle with tightening torque. See **TORQUE SPECIFICATIONS** .
9. Further installation is in reverse order. Bleed brake system. For Golf, GTI and Jetta, see **DISC** article in BRAKES. For New Beetle, see **DISC** article in BRAKES.

Removal (Beetle)

1. Measure dimension a from the center of the wheel to the lower edge of the wheel housing. See **Fig. 3** . Make a note of the measurement. This is necessary to tighten the bolts for the rear axle to the bearing bracket.
2. Install brake pedal loading device V.A.G1869/2 to apply brakes. Actuate the brake pedal with brake pedal loading device. The bearing bracket that secures axle beam to body should not be removed to remove the rear axle!
3. Raise and support vehicle.
4. On vehicles without ABS, remove bolts fastening brake pressure regulator. See **Fig. 8** .
5. On all models, disconnect brake lines (arrow A) and remove clip. See **Fig. 11** . Pull left brake hose out of retainer (2). Pull right brake hose out of rear axle beam. Pull parking brake cables out of retainers (arrow B). Place transmission jack V.A.G 1383 A in position. Remove bolts (1) on rear axle bearing bracket on both sides.
6. Tighten rear axle with tensioning strap T10038 over mounting from muffler system. See **Fig. 12** .
7. Place engine/transmission jack V.A.G1383A with universal transmission support V.A.G1359/2 under the control arm (danger of accident from falling parts when pulling out the wheel hub and the wheel bearing).
8. Press out rear axle beam bonded rubber bushing using special tools. See **Fig. 13** .
    - 1 - VAS6179
    - 2 - VAS6180/1
    - 3 - VAS6180/4 long
    - 4 - VAS6180/3
    - 5 - 3416/2 Press Piece
    - 6 - VAS6180/2
    - 7 - V.A.G1383A with V.A.G1359/2

NOTE: Edges of separating device VAS6180/2 must come in position between the collar of the bonded rubber bushing and the connection of the control arm. The note "Top" on the separating device VAS6180/2 must point to the control arm.

Installation (Beetle)

1. Bonded rubber bushing is marked on face with the marks (1). See **Fig. 14** . They must align with the edge (arrow) on trailing arm (2). Mark position of marks (1) on bonded rubber bushing.
2. Install bonded rubber bushing using special tools on rear axle. See **Fig. 15** .
   - 1 - VAS6179
   - 2 - VAS6180/1
   - 3 - VAS6180/6
   - 4 - VAS6180/7
   - 5 - Bonded rubber bushing
   - 6 - VAS6180/8
   - 7 - V.A.G1383A with V.A.G1359/2

   NOTE: The note "Top" on the device VAS6180/8 points to the control arm.

3. BEFORE installing bonded rubber bushing, make sure that the mark (arrow A) align with the edge (arrow B) of trailing arm. See **Fig. 16** .
4. Press in bonded rubber bushing until a gap of 0.008 in. (0.2 mm) is available. See **Fig. 17** . Measure this gap (arrow) with a measure gauge (A). Check position of bonded rubber bushing after installing.
5. **CAUTION: If the vehicle is not secured, there is a risk that it may slip off the hoist.**

   Tighten vehicle to the lifting platform. Remove the plugs from the trailing arm (3). See **Fig. 4** . Tighten the tensioning strap (1). Support arm of lifting platform (2). Tightening strap T10038. The vehicle must be tightened with the tensioning straps on left and right side.
6. Grease bonded rubber bushing kidney shaped cavity with assembly paste G052150A2 before installing rear axle. If the rear axle is not "lubricated" when installed, it will be noisy while driving.
7. **CAUTION: Do not raise or lower vehicle while engine and transmission jack is under vehicle. Do not leave engine and transmission lift under the vehicle longer than necessary.**

   Tightening bearing bracket is only possible, when the measured value (a) from the middle of wheel hub to lower edge bordering wheel housing is reached. See **Fig. 10** . Otherwise the bonded rubber bushing will be distorted, resulting in reduced service life. Turn the wheel hub until one of the holes for the wheel bolts is at the 12 o'clock position. Install the support T10149 with a wheel bolt. Lift the wheel bearing housing using the engine and transmission jack until dimension a is reached.
8. Tighten bolts from bearing bracket to rear axle with tightening torque. See **TORQUE SPECIFICATIONS** .
9. Further installation is in reverse order. Bleed brake system. For Golf, GTI and Jetta, see **DISC** article in BRAKES. For New Beetle, see **DISC** article in BRAKES.

BONDED RUBBER BUSHING (HYDRAULIC)

NOTE: After removing the hydraulic bonded rubber bushings, only "conventional" bonded rubber bushings must be installed. The hydraulic bonded rubber bushings must be replaced on both sides of rear axle. A mixed installation is not allowed.

NOTE: Before attempting replacement of bonded rubber bushing read notes concerning bushings under DESCRIPTION .

NOTE: On vehicles equipped with replaceable bonded rubber bushing, bushing can be replaced without removing axle beam.

Removal

1. Measure dimension a from the center of the wheel to the lower edge of the wheel housing. See **Fig. 2** - **Fig. 3** . Make a note of the measurement. This is necessary to tighten the bolts for the rear axle to the bearing bracket.
2. Install brake pedal loading device V.A.G1869/2 to apply brakes. Actuate the brake pedal with brake pedal loading device. The bearing bracket which supports axle beam to body should not be removed to remove the rear axle!
3. Raise and support vehicle.
4. Remove wheels. Separate brake lines (arrow A) and remove clip. See **Fig. 11** . Remove left brake hose from bracket (2). Remove right brake hose from rear axle. Remove parking brake cable from brackets. (arrow B).
5. Place engine/transmission jack V.A.G1383A under axle beam. Remove bolt (1) for bearing bracket on rear axle on both sides. See **Fig. 11** . Lower rear axle using engine and transmission jack V.A.G1383A.
6. Tighten rear axle with tensioning strap T10038 over mounting from muffler system. See **Fig. 12** .
7. On vehicles with automatic headlight range control, removing connecting link from Left Rear Level Control System Sensor from rear axle. See **Fig. 5** .
8. On all vehicles, place engine/transmission jack V.A.G1383A with universal transmission support V.A.G1359/2 under the control arm (danger of accident from falling parts when pulling out the wheel hub and the wheel bearing).
9. **NOTE: The edges of separating device VAS6180/2 must come in position between the collar of the bonded rubber bushing and the connection of the control arm. The note "Top" on the separating device VAS6180/2 must point to the control arm.**

   To press out center of hydraulic bonded rubber bushing, install special tools on rear axle. See **Fig. 18** . Pull a plastic bag over the special tools and control arm to pick up the escaping oil when pressing out the center of bonded rubber bushing. Press out the center of bonded rubber bushing using special tools.

   - 1 - VAS6178

- 2 - VAS6180/1
- 3 - VAS6180/4 long
- 4 - VAS6180/3
- 5 - VAS6180/2
- 6 - V.A.G1383A with V.A.G1359/2

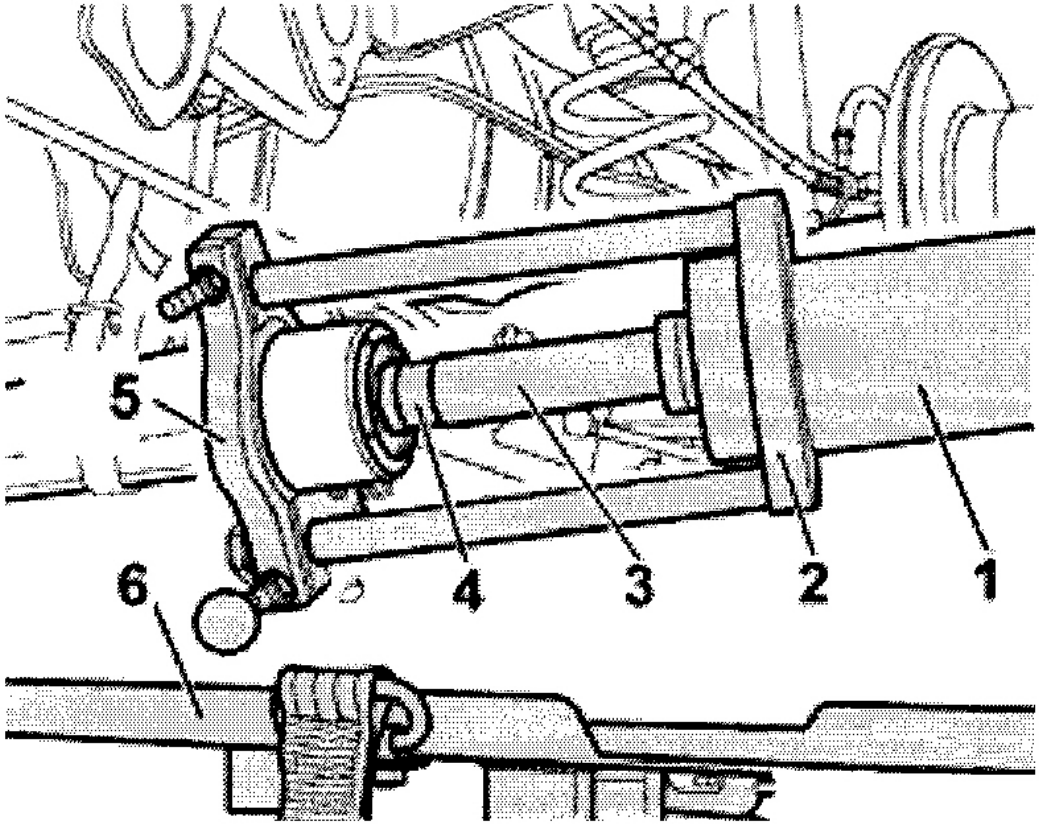

Fig. 18: Pressing Out Center Of Hydraulic Bonded Rubber Bushing
Courtesy of VOLKSWAGEN UNITED STATES, INC.

10.

NOTE: The note "Top" on the device VAS6180/8 points to the control arm.

Pressing out sleeve of hydraulic bonded rubber bushing using special tools. See **Fig. 19** .

- 1 - VAS6179
- 2 - VAS6180/1

- 3 - VAS6180/4 long
- 4 - VAS6180/5
- 5 - VAS6180/8
- 6 - V.A.G1383A with V.A.G1359/2

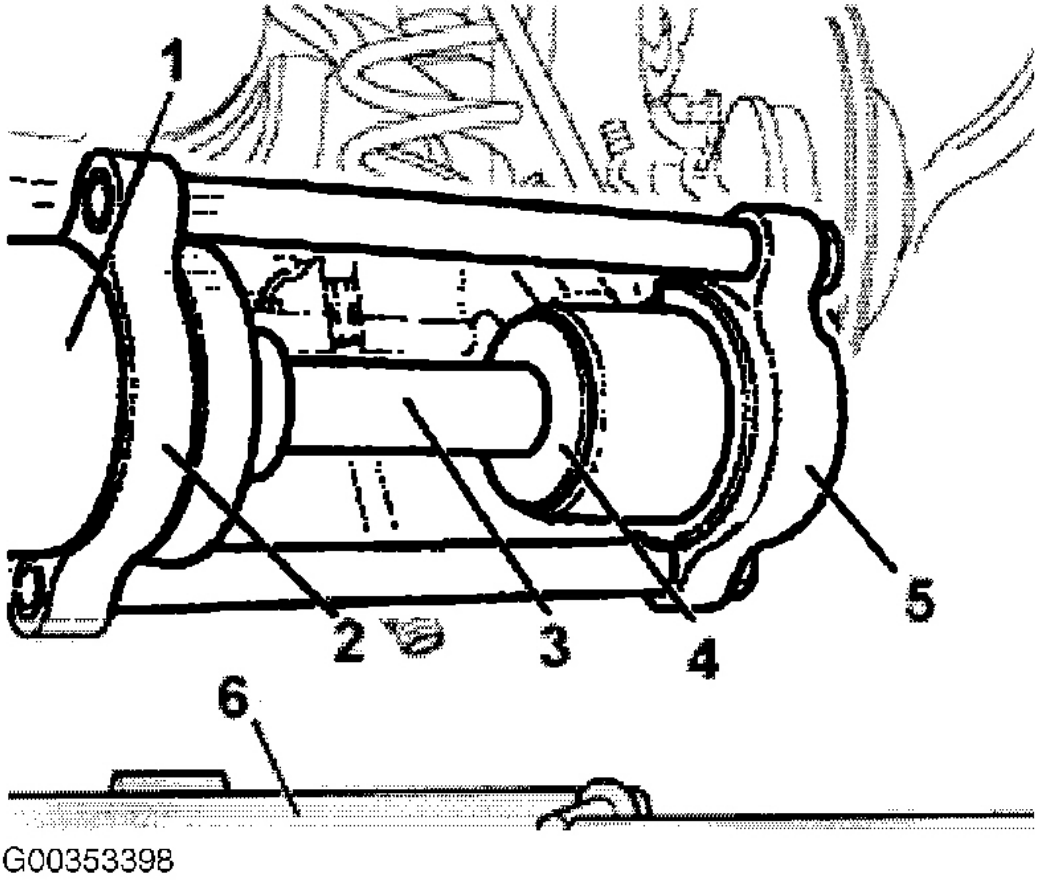

Fig. 19: Pressing Out Hydraulic Bonded Rubber Bushing Sleeve
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Installation

To install new non-hydraulic bushings, see **INSTALLATION (EXCEPT BEETLE)** or **INSTALLATION (BEETLE)** under BONDED RUBBER BUSHING (NON-HYDRAULIC).

COIL SPRING

NOTE: Coil springs can be removed by loosening rear shock absorbers and lowering

axle beam, or using spring compressor.

Removal & Installation

Raise and support vehicle. Remove wheels. Install spring compressor to coil spring. See **Fig. 20** . Compress spring until it can be removed from vehicle. To install, reverse removal procedure. Ensure zinc spacer bushing is not damaged. Replace as necessary. Install spring together with spring seat. End of spring must rest against stop on spring seat when installed. See **Fig. 21** .

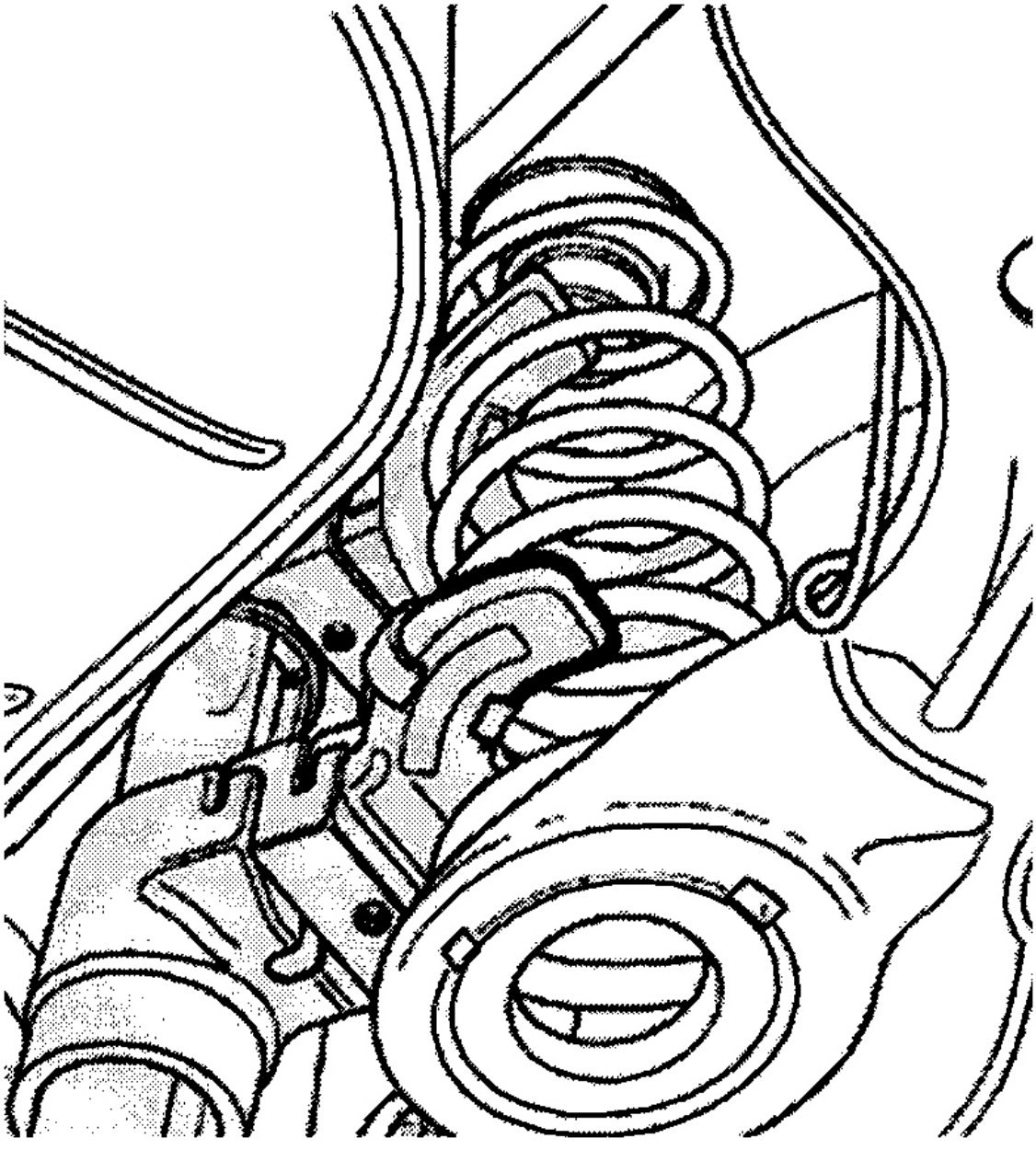

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Fig. 20: Compressing Coil Spring
Courtesy of VOLKSWAGEN UNITED STATES, INC.

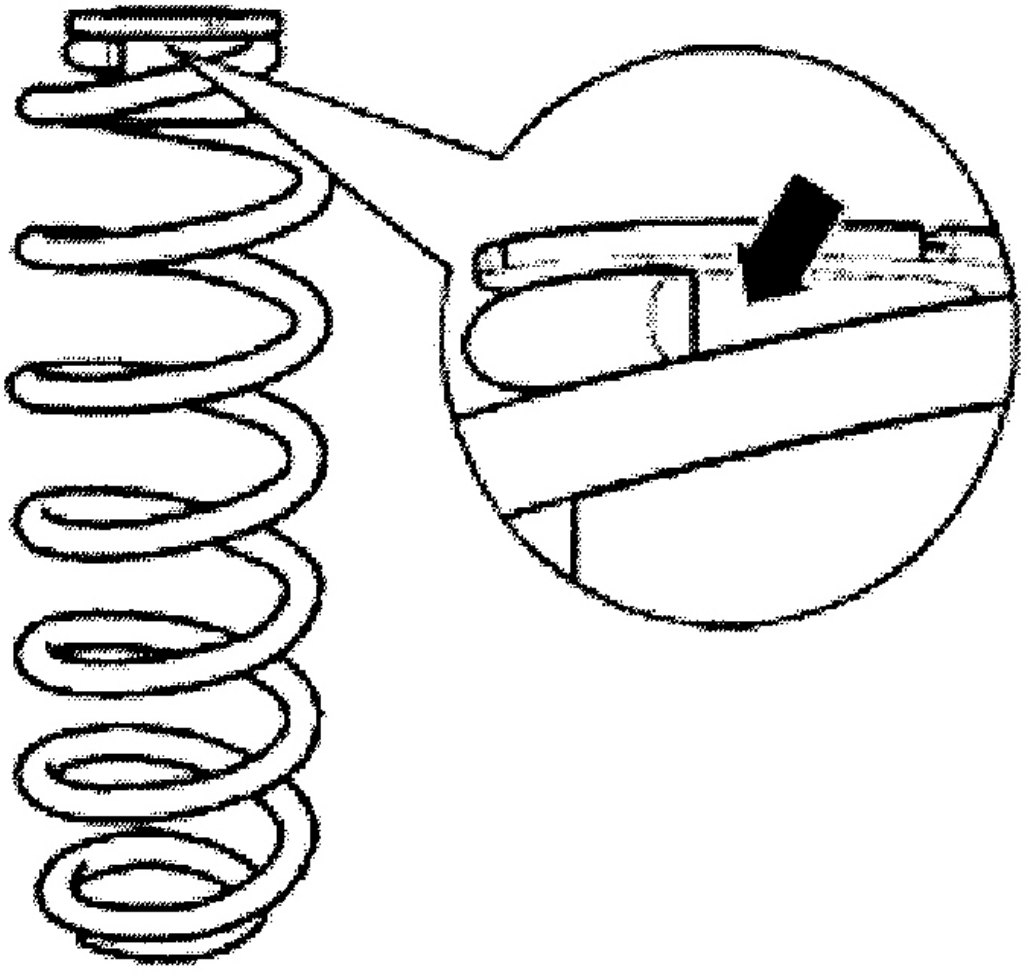


Fig. 21: Locating Upper Spring Seat
Courtesy of VOLKSWAGEN UNITED STATES, INC.

SHOCK ABSORBER

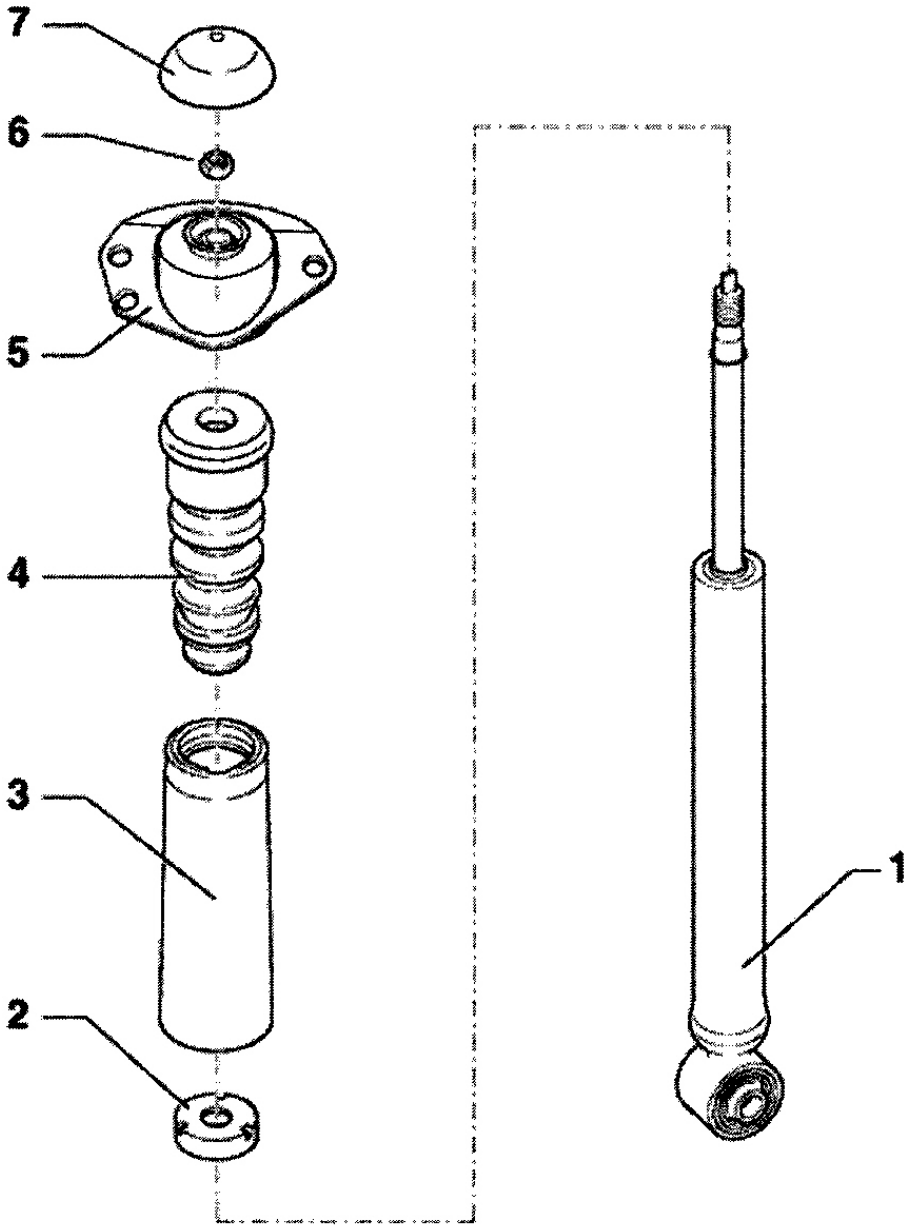
Removal & Installation

1. Raise vehicle so that rear wheels still contact the ground, but upper shock mount bolts are accessible. Remove upper shock absorber mounting bolts. Remove coil spring. See **COIL SPRING** .
2. Remove lower shock absorber mounting bolts. Remove shock absorber.
3. Install shock absorber and coil springs, leave upper and lower shock absorber mount bolts finger tight.

Install wheels. Lower vehicle to ground. Preload rear of vehicle with the approximate weight of one person. Tighten shock absorber mounting bolts to specification. See **TORQUE SPECIFICATIONS** .

Disassembly & Assembly

Use illustration to disassemble and assemble shock absorber. See **Fig. 22** .



1. Gas-Filled Shock Absorber
2. Protective Cap
3. Protective Sleeve
4. Stop Buffer
5. Mounting Bushing
6. Self-Locking Piston Nut (Always Replace)
7. Dust Cover

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Fig. 22: Exploded View Of Shock Absorber Assembly
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Inspection

With shock absorber disassembled, press shock absorber together by hand. When doing this the piston rod must move over its complete length smoothly and with even force. When the shock absorber has sufficient gas pressure the piston rod returns to its original starting position. If the piston rod does not return to its starting position and there is no loss of oil then the shock absorber is still OK.

WHEEL BEARING

Removal

1. Raise and support vehicle. Remove wheel. Remove dust cap. Remove brake caliper, and support aside. Remove brake disc.
2. Using a wheel bearing/hub puller i.e. (Kukko Puller 20/2). See **Fig. 23** . Pull bearing inner race off stub axle using Leg Clamp Puller (Kukko 204-2).

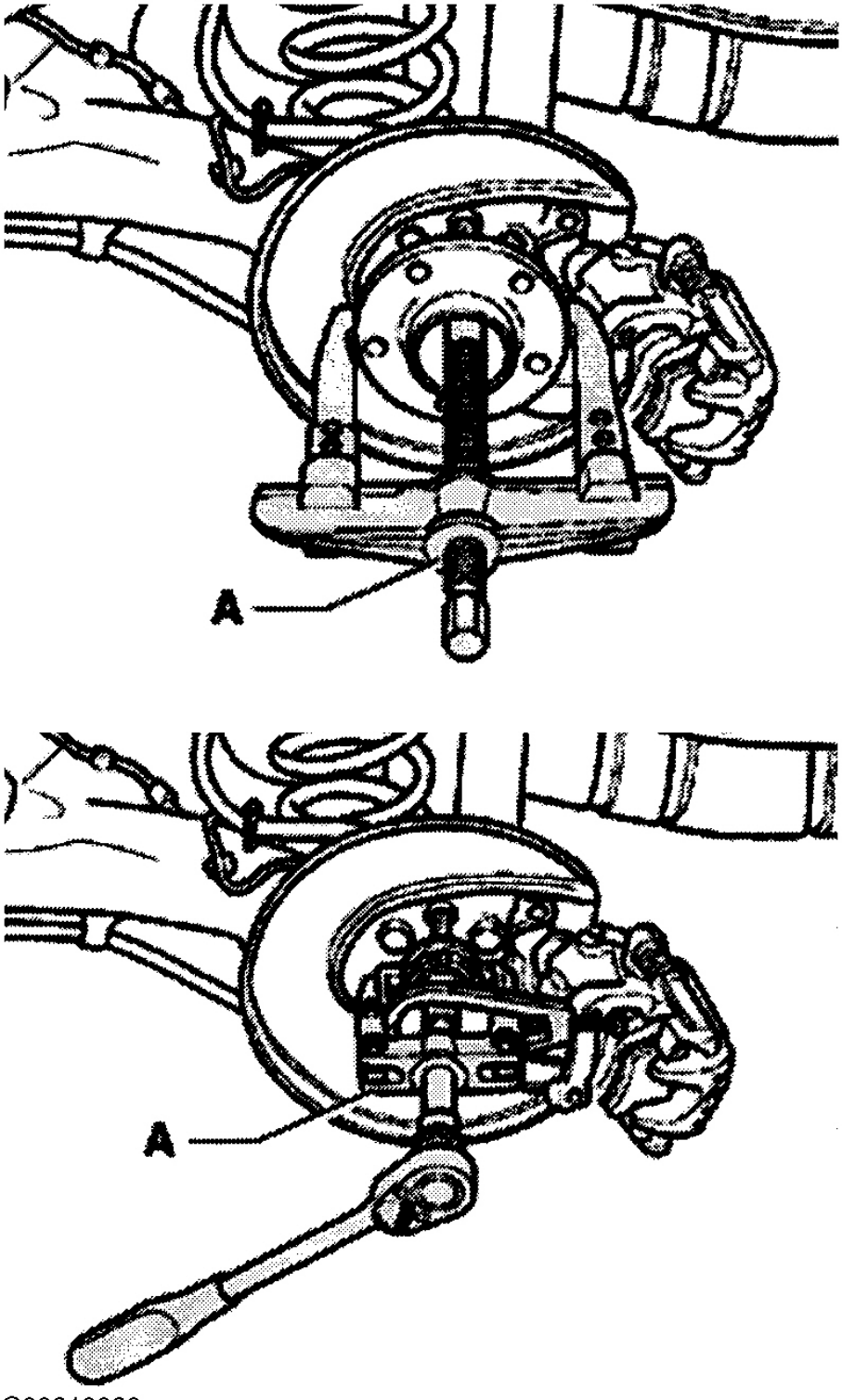

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Fig. 23: Removing Wheel Bearing/Hub Assembly
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Installation

1. Install wheel bearing/hub unit as far as possible onto stub axle. Attach Assembler (3420) and pull wheel bearing/hub unit to stop. Remove installer.
2. Install NEW 12-point nut and tighten to specification. See **TORQUE SPECIFICATIONS** . To complete installation, reverse remaining removal procedure.

NOTE: A perfect seal is only achieved using a new dust cap. Only then is an optimum function and long service life guaranteed.

TORQUE SPECIFICATIONS

WARNING: Do not re-use any fasteners that are worn or deformed in normal use.

WARNING: Some fasteners are designed to be used only once, and are unreliable and may fail if used a second time. This includes, but is not limited to nuts, bolts, washers, circlips and cotter pins. Always follow the recommendations. Replace these fasteners with new parts where indicated, and any other time it is deemed necessary by inspection.

NOTE: Bonded rubber mountings have a limited turning range. The axle parts with bonded rubber mountings must be positioned in the driving position before being tightened (unladened vehicle state). The bonded rubber bushing will be stressed, resulting in a reduced service life.

TORQUE SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Brake Backing Plate Bolt (Splash Shield)	44 (60)
Brake Caliper-Carrier Bolt	26 (35)
Brake Caliper Carrier-To-Axle Bolt	48 (65)
Coil Spring Retainer-To-Piston Rod Nut	11 (15)
Shock Absorber Piston Rod Nut (1)	18 (25)
Shock Absorber-To-Axle Beam Bolt (2)	(3) 30 (40)
Shock Absorber-To-Body Bolts (1)	
Except Beetle	55 (75)
Beetle	(3) 22 (30)
Stub Axle-To-Control Arm Bolt (1)	44 (60)
Rear Axle-To-Mounting Bracket Bolt (1)	(2) 60 (80)
Rear Axle Mounting Pad-To-Body Bolt (1)	
Except Beetle	55 (75)
Beetle	

	(3) 22 (30)
Vibration Damper Bolt (1)	(4) 15 (20)
Wheel Bearing Hub Nut (1)	129 (175)
Wheel Lug Bolt	89 (120)
	INCH Lbs. (N.m)
ABS Wheel Sensor Bolt	70 (8)

(1) Always replace with NEW fasteners.

(2) Final tighten bolt with rear axle at normal ride height.

(3) Tighten to specification plus an additional 90° turn.

(4) Tighten to specification plus an additional 45° turn.